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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,595	08/30/2001	Gary L. Swoboda	TI-30482	2423
23494	7590	09/08/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265				SAXENA, AKASH
		ART UNIT		PAPER NUMBER
				2128

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/943,595	SWOBODA, GARY L.
Examiner	Art Unit	
Akash Saxena	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 14 June 2005.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-4, 16, 17 and 27-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-4, 16, 17 and 27-36 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 August 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

1. Claims 1-4, 16-17 and 27-36 have been presented for examination based on the amendment filed on 14th June 2005 for application 09/943595.
2. Claims 5-15 and 18-26 are cancelled by the amendment. New claims 30-36 are presented for examination.
3. Acknowledgement is made for the new declaration filed with the amendment and examiner withdraws objection to the declaration.
4. Examiner withdraws the 35 USC 112 rejection made for claims 1-5 in view of the new amendment.

Response to applicant's arguments against Claim Rejections - 35 USC § 102

1. Response to Arguments against Claim 1, 16 and 27 rejections (Pg.20-22):

Applicant argues that Edwards explicitly permit the variable length messages and thus contradicts the first fixed size. The examiner respectfully disagrees. Edwards clearly teaches fixed as well as variable buffer sizes (Col.17 Lines 45-58). Further, applicant argues that Edwards does not disclose that first and second information blocks differ in size. Examiner disagrees with the applicant's argument as Edwards teaches fixed upper limit in size of the first information block (Col.17 Lines 58-67 - 24 bytes) and second information block (Fig.9 Limited to 0-7 bytes) in the trace buffer.

Hence applicant's arguments are found to be unpersuasive and the rejection is maintained.

Further, applicant argues that Edwards fails to teach that number of output terminals of the transmission circuit is equal to the size of the second information block.

Examiner is unable to find the specification where it states that the number of terminals is the same as size of the second packet (Specification: Pg.23 Line 18 – Pg.24 Line 2; Fig.22). Further, the transmission formatter and trace exporter system (Specification: Fig 22) is also taught by Edward and for the same function of exporting the trace to a debug system. All the pieces recited in the trace exporter system would be inherent in Edward's design as they achieve they same function.

Applicant arguments are found to be unpersuasive and rejection is maintained.

2. Response to Arguments against Claim 2, 17 and 34 rejections (Pg.22):

Applicant argues that the data compression disclosed in Edwards fails to anticipate the rearrangement of data from a first fixed size to a smaller fixed size as recited in claims 2, 17 and 34. Examiner respectfully disagrees as Edwards teaches fixed upper limit in size of the first information block (Col.17 Lines 58-67 – 3*8 bytes) and second information block (Fig.9 Limited to 8 bytes) in the trace buffer.

Further, although compression was used as basis of argument there is no limitation presented in the claim that limits the change in size of second information block is not due to compression of the first fixed size. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Further, claims 2, 17 and 34 also suffer from not clearly defining the meets and bounds of what is meant by first fixed size and second fixed size. See 35 USC 112 rejections below. Applicant arguments are found to be unpersuasive and rejection is maintained.

5. Rejection related to claims 1-4, 16-17 and 27 as made under 35 USC 102, with Edwards in previous office action is maintained and the claims are rejected with the same response as before.
6. Rejection related to claims 28-29 made under 35 USC 103, with Edwards in view of Latif in previous office action is maintained and the claims rejected with the same response as before.

Specification

7. This instant application still does not contain a summary of invention even after the amendment. Contents of the specification include. Appropriate corrections are required.

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive

concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) **Brief Description of the Several Views of the Drawing(s):** See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) **Detailed Description of the Invention:** See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) **Claim or Claims:** See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) **Abstract of the Disclosure:** See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) **Sequence Listing:** See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1-4, 16-17, and 27-36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claims 1-4 & 30-31

Claim 2 recites "plurality of terminals equal in number to second fixed size". A person skilled in the art would not know how to determine the size of plurality of terminals from the provided disclosure, given the fact that the size of the second fixed size is undetermined.

Claims 2-4 & 30-31 are rejected based on their dependency on claim 1.

Regarding Claims 16-17 & 32-33

Claim 16 recites substantially same limitations as claim 1 and is rejected for the same reasons as claim 1 above. Further, claims 17 & 32-33 are rejected based on their dependency on claim 16.

Regarding Claims 27-29 & 34-36

Claim 27 recites substantially same limitations as claim 1 and is rejected for the same reasons as claim 1 above. Further, claims 28-29 & 34-36 are rejected based on their dependency on claim 27.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claims 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. US Patent No 6,732,307 issued to Edwards in view of “Report and Discussion n the IEEE ComSoc TCGN Gigabit Networking Workshop 1995” James P G. Sterbenz et al (Sterbenz hereafter).

Regarding Claims 30-36,

Teaching of Edwards relating to collection of trace information in first fixed size and second fixed size is provided in respective parent and/or independent claim rejection in previous office action. Edwards teaches current packet register as target port registers (Fig.2 Element 212).

Edwards does not teach the new limitations where the second fixed size information block “is” and “is not” in multiples of first information blocks explicitly. Further, Edwards also does not teach last packet register.

Sterbenz teaches IP over ATM networks (Sterbenz: Pg 11 “TCP/IP over ATM”). Disclosure in the claims 30-36 is directed towards segmentation and reassembly (SAR) of first fixed information block into multiple fixed second information blocks for the purpose of transmission to the debug system. This is very similar to how most of the high level data (application - transport layer in OSI model) is transmitted using TCP/IP protocol over an ATM network. TCP/IP packets up to 1500 Bytes where as ATM Cell can handle a payload of 48 octets. Hence there are situations where the ATM Cell completely handles TCP/IP and in other cases there are remaining bits. Further, all the steps of the method or the components of integrated circuit are

substantially taught or would be necessitated by obviousness, by Sterbenz in conjunction with knowledge of a person ordinary skilled in the art.

It would have been obvious to one (e.g. a designer) of ordinary skill in the art at the time the invention was made to apply the teachings of Sterbenz to Edwards to convert the first fixed block of information into second fixed block of information. The motivation to combine would have been that reasons of converting the from one fixed format to another is to facilitate transmission and TCP/IP over ATM solves the same problem where the TCP/IP packets are much larger and ATM Cells are smaller in size. Further, TCP/IP protocol has proven to extremely flexible and ATM technology has emerged as next-generation-network (Sterbenz: Pg.13, Col.1) as provider of unprecedented scalability and cost/performance. It is only advantageous to model packet network on such a proven technology.

Relevant References

10. IP Addressing over ATM - IETF RFC 1577
(<http://www.cis.ohio-state.edu/htbin/rfc/rfc1577.html>)
11. "TCP/IP: The next Generation" – Showing the TCP/IP and ATM at various levels of OSI Model in Fig.1. IBM Systems Journal 1995
12. "TCP/IP over ATM Challenges in Enterprise Network Integration" Suffian Yousef by et al, IEEE 1998
13. U.S. Patent No. 6,041,406 Issued to Daniel Mann for Serial and Parallel Debug Port on a Processor.
14. **Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.
In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Conclusion

15. All claims are rejected.

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Akash Saxena whose telephone number is (571) 272-8351. The examiner can normally be reached on 8:30 - 5:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean R. Homere can be reached on (571)272-3780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Akash Saxena
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Friday, August 26, 2005


JEAN R. HOMERE
PRIMARY EXAMINER